

## § 80.911

## 47 CFR Ch. I (10–1–99 Edition)

(2) The transmitter, with normal operating voltages applied, has been demonstrated to deliver its required output power on the frequencies specified in paragraphs (a) or (b) of this section into either an artificial antenna consisting of a series network of 10 ohms effective resistance and 200 picofarads capacitance or an artificial antenna of 50 ohms nominal impedance. An individual demonstration of power output capability of the transmitter, with the radiotelephone installation normally installed on board ship, may be required.

(d) The single sideband radiotelephone must be capable of transmitting clearly perceptible signals from ship to shore. The transmitter complies with this requirement if it is capable of enabling communication with a public coast station on working frequencies in the 4000 to 27500 kHz band specified in § 80.371(b) of this part under normal daytime operating conditions.

[56 FR 19302, Apr. 26, 1991, as amended at 57 FR 34262, Aug. 4, 1992]

### § 80.911 VHF transmitter.

(a) The transmitter must be capable of transmission of G3E emission on 156.800 MHz, 156.300 MHz, and on the ship-to-shore working frequencies necessary to communicate with public coast stations serving the area in which the vessel is navigated.

(b) The transmitter must be adjusted so that the transmission of speech normally produces peak modulation within the limits 75 percent and 100 percent.

(c) The transmitter must be certified to transmit between 20 watts and 25 watts, on each of the frequencies 156.300 MHz, 156.800 MHz and on ship-to-shore public correspondence channels, into 50 ohms effective resistance when operated with a primary supply voltage of 13.6 volts DC.

(d) When an individual demonstration of the capability of the transmitter is necessary the output power requirements prescribed in this paragraph must be met as follows:

(1) Measurements of primary supply voltage and transmitter output power must be made with the equipment drawing energy only from ship's battery;

(2) The primary supply voltage, measured at the power input terminals to the transmitter, and the output power of the transmitter, terminated in a matching artificial load, must be measured at the end of 10 minutes of continuous operation of the transmitter at its full power output.

(3) The primary supply voltage must not be less than 11.5 volts.

(4) The transmitter output power must be not less than 15 watts.

(5) For primary supply voltages, measured in accordance with the procedures of this paragraph, greater than 11.5 volts, but less than 12.6 volts, the required transmitter output power shall be equal to or greater than the value calculated from the formula

$$P=4.375(V) - 35.313$$

where V equals the measured primary voltage and P is the calculated output power in watts."

[51 FR 31213, Sept. 2, 1986, as amended at 54 FR 40059, Sept. 29, 1989; 63 FR 36607, July 7, 1998]

### § 80.913 Radiotelephone receivers.

(a) If a medium frequency radiotelephone installation is provided, the watch receiver must be capable of effective reception of J3E emissions, be connected to the antenna system specified by § 80.923, and be preset to, and capable of accurate and convenient selection of, the frequencies 2182 kHz, 2638 kHz, and the receiving frequency(s) of public coast stations serving the area in which the vessel is navigated.

(b) If a single sideband radiotelephone installation is provided, the receiver must be capable of reception of H3E and J3E emissions on 2182 kHz and J3E emission on any receiving frequency authorized pursuant to § 80.909 of this part.

(c) If a very high frequency radiotelephone installation is provided, the receiver used for maintaining the watch required by § 80.303 must be capable of effective reception of G3E emission, be connected to the antenna system specified by § 80.923 and be preset to, and capable of selection of, the frequencies 156.300 MHz, 156.800 MHz, and the receiving frequency(s) of public coast stations serving the area in which the vessel is navigated.

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(d) One or more loudspeakers must be provided to permit reception on 2182 kHz or 156.800 MHz at the principal operating position and at any other place where listening is performed.

(e) Any receiver provided as a part of the radiotelephone installation must have a sensitivity of at least 50 microvolts in the case of MF equipment, and 1 microvolt in the case of HF or VHF equipment.

(f) The receiver required in paragraphs (a), (b) or (c) of this section must be capable of efficient operation when energized by the main source of energy. When a reserve source of energy is required pursuant to §80.905 or §80.917 of this part, the receiver must also be capable of efficient operation when energized by the reserve source of energy.

(g) The sensitivity of a receiver is the strength in microvolts of a signal, modulated 30 percent at 400 Hertz, required at the receiver input to produce an audio output of 50 milliwatts to the loudspeaker with a signal-to-noise ratio of at least 6 decibels. Evidence of a manufacturer's rating or a demonstration of the sensitivity of a required receiver computed on this basis must be furnished upon request of the Commission.

[51 FR 31213, Sept. 2, 1986, as amended at 56 FR 19302, Apr. 26, 1991]

### § 80.915 Main power supply.

(a) There must be readily available for use under normal load conditions a main power supply sufficient to simultaneously energize the radiotelephone transmitter at its required antenna power, and the required receiver. Under this load condition the potential of the main power supply at the power input terminals of the radiotelephone installation must not deviate from its rated potential by more than 10 percent on vessels completed on or after March 1, 1957, nor by more than 15 percent on vessels completed before that date.

(b) When the main power supply consists of batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.

(c) Means must be provided for adequately charging any batteries used as a main power supply. There must be a device which gives a continuous indication of the rate and polarity of the charging current during charging.

[51 FR 31213, Sept. 2, 1986, as amended at 58 FR 44953, Aug. 25, 1993]

### § 80.917 Reserve power supply.

(a) A vessel of more than 100 gross tons the keel of which was laid after March 1, 1957, must have a reserve power supply located on the same deck as the main wheel house or at least one deck above the vessel's main deck, unless the main power supply is so situated.

(b) The reserve power supply must be independent of the ship's propulsion and of any other electrical system, and be sufficient to simultaneously energize the radiotelephone transmitter at its required output power, and the receiver. The reserve power supply must be available for use at all times.

(c) When the reserve power supply consists of batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.

(d) The reserve power supply must be located as near the required transmitter and receiver as practicable.

(e) All reserve power supply circuits must be protected from overloads.

(f) Means must be provided for charging any storage batteries used as a reserve power supply for the required radiotelephone installation. There must be a device which will give continuous indication of the rate and polarity of the charging current during charging.

(g) The cooling system of each internal combustion engine used as a part of the reserve power supply must be adequately treated to prevent freezing or overheating consistent with the season and route to be travelled by the particular vessel involved.

[51 FR 31213, Sept. 2, 1986, as amended at 58 FR 44954, Aug. 25, 1993]